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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/538,422

06/10/2005

Michael Hulskemper

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EXAMINER

PHAM, TUAN

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/538,422	<b>Applicant(s)</b> HULSKEMPER, MICHAEL	
	<b>Examiner</b> TUAN A. PHAM	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7-9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-9 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/10/2008 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 7-9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bae et al. (US Pub. No.: 2004/0203496, hereinafter, "Bae") in view of Kubo (US Patent No.: 5,883,966) in view of Bank et al. (US Pub. No.: 2003/0059069, hereinafter, "bank") and further in view of Mori (US Patent No.: 6,539,208).**

**Regarding claim 7**, Bae teaches a mobile telephone comprising (see figure 2):  
a first and a second housing part (see figure 2, sliding housing 20, main housing 10, [0022]), wherein each housing part can be displaced by sliding with respect to one

Art Unit: 2618

another in such a way that respective sections of each housing part are exposed as a result of the displacement (see figure 2, [0022]),

a keypad located in the first housing part (see figure 2, keypad 12, main housing 10[ 0022, 0025]); and

the bending wave loudspeaker travels on a path that is parallel to the keypad when each housing part is displaced by sliding (see figure 2, speaker 22, keypad 12, it is clearly seen that speaker 22 travel on the path that is parallel to the keypad 12 when the sliding housing slide).

It should be noticed that Bae fails to teach an exposed section of the second housing part comprises an internal acoustic area defined by a wall located within the second housing part that separates the acoustic area from the remainder of the second housing part, and speaker and operating element are located on an outside surface of the acoustic area. However, Kubo teaches an exposed section of the second housing part comprises an internal acoustic area (read on air chamber) defined by a wall located within the second housing part that separates the acoustic area from the remainder of the second housing part (see figure 5, speaker 18, speaker case 16, air chamber 20, col.3, ln.4-31), and speaker and operating element are located on an outside surface of the acoustic area (see figure 5, speaker 18, speaker case 16, air chamber 20, col.3, ln.4-31, it is obvious that the speaker system that is included a piezoelectric resonant element).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kubo into view of Bae in

order to improve acoustic characteristic of speaker and free from deterioration of conversation quality as suggested by Kubo at col.1, ln.45-48.

Bae and Kubo, in combination, fails to teach a bending wave loudspeaker comprising a plate-like element for emitting audible signals and an operating element for exciting bending waves in the plate-like element. However, Bank teaches a bending wave loudspeaker comprising a plate-like element for emitting audible signals and an operating element for exciting bending waves in the plate-like element (see figures 5, 10, 12, plate-like, active piezoelectric resonant element, [0061, 0078, 0081]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Bank into view of Bae and Kubo in order to improve the input energy as suggested by Bank at col.1, [0007].

Bae, Kubo and Bank, in combination, fails to teach speaker is that faces away from a user. However, Mori teaches speaker is that faces away from a user (see figure 5, speaker 31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Mori into view of Bae, Kubo and Bank in order to provide easier-to-handle and good visibility for the user as suggested by Mori at col.2, ln.47-50.

**Regarding claim 8**, Bank further teaches a material for the plate-like element is optimized for the purpose of excitation with bending vibrations (see [0004, 0057]).

**Regarding claim 9**, after combine, Mori teaches a keypad arranged in the section of the first housing part that is exposed by the displacement (see figure 5,

keypad 41 is located on the body 1). Kubo teaches the plate-like element of the bending wave loudspeaker is arranged in the exposed section of the second housing part (see figure 5, speaker 18 is located on second housing).

**Regarding claim 11**, Bank further teaches the separating wall mechanically protects the interior of the second housing part against buckling of the plate-like element (see figure 2, upper and lower beam 88 and 90).

### **Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A. Pham whose telephone number is (571) 272-8097. The examiner can normally be reached on Monday through Friday, 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2618

you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/TUAN A PHAM/  
Examiner, Art Unit 2618

Tuan Pham